

Clean version

WHAT IS CLAIMED IS

1. A pipette tip for sample preparation, which contains chromatography particles and has an open upper end and a closed lower end and has one or more perforations at the said lower end to permit the passage of fluids through said perforations while retaining chromatographic particles in the said pipette tip, said chromatographic particles are larger than the said perforations.
2. A pipette tip, as in claim 1, wherein said pipette tip is a holding unit is selected from the group consisting of a tube, a housing, a column, and a vial.
4. A pipette tip, as in claim 1, wherein multiple units of said pipette tip are joined together.
7. A pipette tip, as in claim 1, wherein said pipette tip is made of materials selected from the group consisting of polytetrafluoroethylene, polysulfone, polyethersulfone, polypropylene, polyethylene, fluoropolymers, cellulose acetate, polystyrene, polystyrene/acrylonitrile copolymer, PVDF, glass, and combination thereof.
8. A pipette tip as in claim 1, wherein the volume of said pipette tip is between 0.00001 and 100 milliliters.

9. A pipette tip as in claim 1, wherein one or more of said perforations are made at the bottom of or on the lateral sides of said pipette tip.
10. A pipette tip as in claim 1, wherein said perforations include one or more selected from the group consisting of cracks, slits, cuts, holes, incisions orifices, and combination thereof.
11. A pipette tip as in claims 1, wherein the method to make said perforations is a chemical or physical method selected from the group consisting of cutting with a knife, blade, or laser beam, applying heat or pressure, using chemical reactions, and combination thereof.
13. A pipette tip as in claim 1, wherein said pipette tip contains a chromatographic or separation material which can be in a form from the group consisting of particle, powder, sheet, woven, non-woven, and combination thereof.
14. A pipette tip as in claim 1, wherein said chromatographic particles is selected from the group consisting of one type of material, a mixture of different sizes of particles, different types of materials, and combination thereof.
15. A pipette tip as in claim 1, wherein said chromatography particles is selected from the group consisting of chromatographic silica, polystyrene, carbon, polymers, media, gels, solid powders, media used for the purposes of sample filtration, separation or purification.

16. A pipette tip as in claim 1, wherein said chromatography particles can be chemically or physically modified to alter the nature of the separation process.
20. A pipette tip as in claim 1 wherein said pipette tip is combined with a piston designed to pull the sample into said pipette tip or push said sample out of said pipette tip.